

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A concentric hopper and ~~burn~~ combustion chamber comprising:  
a ~~burn~~ combustion chamber in which to combust solid sulphur, the ~~burn~~ combustion chamber comprising one or more sidewalls, a base, a lid and a gas outlet;  
a hopper to hold solid sulphur to be combusted, the hopper comprising one or more sidewalls, a base and a lid, wherein the sulphur hopper substantially surrounds the ~~burn~~ combustion chamber and;  
a conduit connected to the gas outlet for containing and conducting gases of combustion for further treatment of the gases of combustion.
2. (Original) The concentric hopper and burn chamber of claim 1 further comprising a hatch in the lid of the hopper to permit loading sulphur into the hopper.
3. (Previously Presented) A sulphurous acid generator apparatus comprising:  
a burn chamber in which to combust solid sulphur, the burn chamber comprising one or more sidewalls, a base, a lid and a gas outlet;  
a hopper to hold solid sulphur to be combusted, the hopper comprising one or more sidewalls, a base and a lid, wherein the sulphur hopper substantially surrounds the burn chamber;  
a first conduit connected to the gas outlet for conducting sulphur dioxide gas;  
a second conduit for conducting a stream of water; and  
means for passively introducing the sulphur dioxide gas conducted in the first conduit into the stream of water in the second conduit.
4. (Previously Presented) The sulphurous acid generator of claim 3 further comprising means for substantially eliminating any discharge plume by reducing moisture content of gases and vapors exiting the apparatus.

5. (Currently Amended) A concentric hopper and ~~burn~~ combustion chamber comprising:  
a ~~burn~~ combustion chamber in which to combust solid sulphur, the ~~burn~~ combustion  
chamber comprising one or more sidewalls, a base, a lid and a gas outlet;  
a hopper to hold solid sulphur to be combusted, the hopper comprising one or more  
sidewalls, a base and a lid, wherein the sulphur hopper substantially surrounds the  
~~burn~~ combustion chamber;  
a conduit connected to the gas outlet for containing and conducting gases of combustion  
for further treatment of the gases of combustion; and  
a housing adjacent the ~~burn~~ combustion chamber to capture radiant heat of the ~~burn~~  
~~combustion~~ chamber.

6. (Previously Presented) A sulphurous acid generator apparatus, wherein the sulphurous acid  
generator combusts sulphur creating radiant heat of and about the apparatus, the apparatus  
generating a discharge of gases and/or vapors including moisture causing a visible discharge  
plume, the improvement comprising:  
a burn chamber in which to combust solid sulphur, the burn chamber comprising one or  
more sidewalls, a base, a lid and a gas outlet;  
a hopper to hold solid sulphur to be combusted, the hopper comprising one or more  
sidewalls, a base and a lid, wherein the sulphur hopper substantially surrounds the  
burn chamber; and  
means for substantially eliminating any discharge plume.

7. (Previously Presented) The apparatus of claim 6 where the means for substantially  
eliminating any discharge plume reducing the moisture content of the discharge.

8. (Previously Presented) The apparatus of claim 6 wherein the means for substantially  
eliminating any discharge plume utilizes the radiant heat created by the apparatus to reduce  
moisture content of the discharge.

9. (Original) The apparatus of claim 6 wherein the means for substantially eliminating any discharge plume comprises a heated housing through which exiting gases and vapor flow.

10. (Previously Presented) The apparatus of claim 9 wherein the housing is heated by the radiant heat created by combustion of sulphur in the apparatus.

11. (Currently Amended) A sulphurous acid generator apparatus comprising:

a burn combustion chamber in which to combust solid sulphur, the burn combustion chamber comprising one or more sidewalls, a base, a lid and a gas outlet; a hopper to hold solid sulphur to be combusted, the hopper comprising one or more sidewalls, a base and a lid, wherein the sulphur hopper substantially surrounds the combustion chamber; a first conduit connected to the gas outlet for conducting sulphur dioxide gas; and a second conduit for conducting a stream of water, the second conduit comprising a restrictor, wherein the first conduit extends into the restrictor so as to both point and terminate downstream in the restrictor, and a blender disposed in the second conduit downstream of the restrictor.

12. (Previously Presented) A sulphurous acid generator apparatus comprising:

a burn chamber in which to combust solid sulphur, the burn chamber comprising one or more sidewalls, a base, a lid and a gas outlet; a first conduit connected to the gas outlet for conducting sulphur dioxide gas; and a second conduit for conducting a stream of water, the second conduit comprising a restrictor, wherein the first conduit extends into the restrictor so as to both point and terminate downstream in the restrictor; and means for substantially eliminating any discharge plume by reducing a moisture content of gases and vapors exiting the apparatus.

13. (Previously Presented) The apparatus of claim 12 wherein the means for substantially eliminating any discharge plume utilizes radiant heat created by the apparatus to reduce a moisture content of the discharge.
14. (Previously Presented) The apparatus of claim 12 wherein the means for substantially eliminating any discharge plume comprises a heated housing through which exiting gases and vapor flow.
15. (Previously Presented) The apparatus of claim 14 wherein the housing is heated by radiant heat created by combustion of sulphur in the apparatus.

16. (Previously Presented—Withdrawn) A method for using a sulphurous acid generator apparatus, the method comprising:

contacting water with sulphur dioxide gas in a sulphurous acid generator apparatus to produce a treated acidic water, wherein the sulphurous acid generator apparatus comprises:

a burn chamber in which to combust solid sulphur, the burn chamber comprising one or more sidewalls, a base, a lid and a gas outlet;

a first conduit connected to the gas outlet for conducting sulphur dioxide gas; and

a second conduit for conducting a stream of water, the second conduit comprising a restrictor,

wherein the first conduit extends into the restrictor so as to both point and terminate downstream in the restrictor.

17. (Previously Presented—Withdrawn) The method of claim 16 wherein the burn chamber further comprises means for substantially eliminating any discharge plume, the means comprising reducing moisture content of gases and moisture exiting the apparatus.

18. (Previously Presented—Withdrawn) The method of claim 16 further comprising improving crop growth by irrigating crops with the treated acidic water.

19. (Previously Presented—Withdrawn) The method of claim 18 further comprising increasing a level of sulphur in the crops by allowing the crops to take up sulphur from the treated acidic water.

20. (Previously Presented—Withdrawn) The method of claim 18 further comprising increasing a level of a sulphur-containing chemical compound in the crops by allowing the crops to take up sulphur from the treated acidic water.